

FOR NATIONAL PHASE SUBMISSION

8

PATENT CLAIMS

1. Valve body with a cartridge (21) with a recess (211), that forms an injection nozzle (213) on one end and with a needle (22), that
5 is arranged in the recess (211) and closes the injection nozzle (213), if it rests with its seat area (224) on a needle seat (215) of the cartridge (21), where an area (216) of the cartridge (21) adjacent to the needle seat (215) has a cylindrically-shaped outer contour and the needle (22) has a cylindrically-shaped area
10 (223) adjacent to the seat area (224) and where the area (216) of the cartridge (21) adjacent to the needle seat (215) and the cylindrically-shaped area (223) have the same diameter.
2. Valve body in accordance with claim 1, with the needle seat
15 (215) and the seat area (224) of the needle (22) being conically shaped.
3. Valve body in accordance with one of the preceding claims, where the cartridge (21) has an area adjacent to the area (216)
20 adjacent to the needle seat (224) where the outer diameter of the cartridge (21) is increasing in the direction away from the injection nozzle (213).
4. Fluid injector with a housing (1), an actuator unit (3) and
25 a valve body (2) in accordance with one of the preceding claims.
5. Method for manufacturing a valve body with a cartridge (21) with a recess (211), that forms on one end an injection nozzle (213), and with a needle (22), that is arranged in the recess (221)
30 and closes the injection nozzle (213), if it rests with its seat area (224) on a needle seat (215) of the cartridge (21), where the area (216) of the cartridge (21) adjacent to the needle seat (215) has a cylindrically-shaped outer contour and the needle (22) has cylindrically-shaped area (223) adjacent to the seat
35 area (224) with the following steps:

FOR NATIONAL PHASE SUBMISSION

9

- inserting the needle (22) in the recess (221) and bringing it to rest with its seat area (224) on the needle seat (215),
 - grinding the cylindrically-shaped outer contour of the cartridge (21) and the cylindrically-shaped area (223) of the
- 5 needle (22) together.

6. Method for manufacturing a valve body in accordance with claim 5 where the grinding includes a honing process.

10 7. Method for manufacturing a valve body in accordance with one of claims 5 or 6, where the grinding includes a lapping process.